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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,896	03/23/2001	Valentin Chartier	5974-073	7890

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EXAMINER	
HAVAN, THU THAO	

ART UNIT	PAPER NUMBER
2672	13

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/815,896	CHARTIER ET AL.	
	Examiner	Art Unit	
	Thu-Thao Havan	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 16, 2004 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims **1-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinagawa et al. (US patent no. 6,323,863) in view of Rossignac et al. (non-patent literature titled "A dimension-independent model for pointsets with internal structures and incomplete boundaries").

Re claims **1, 5, 7, 9, 11, and 13**, Shinagawa discloses a computer system operation method for use with a CAD system in modeling objects, method providing a means for identifying cells of a model, each of cells comprising cell identification data and data defining a feature of the model that is associated with

cell (col. 1, lines 7-25; col. 20, lines 6-26; col. 7, lines 40-67; fig. 1) the method comprising receiving input comprising one or more constraints relating to cell information (figs. 1, 18—element 2, and 30—element 21); for each constraint and for each of plurality of cells of a model processing a declarative syntax specifying at least one of received input constrains to determine whether the cell meets the requirement of the constraint (figs 7 and 18—element 3 is the determined unit that determines if the cell meets the requirement of the constraint in programming procedure of figure 7); generating a list of cells meeting the requirements of the constraints (col. 8, lines 1-22; col. 9, lines 13-46; col. 10, lines 5-13—list of array consisting of a list of cells). In other words, Shinagawa discloses a technique for inverting shape data, which is represented in a smaller amount than that of polygon data, into polygon data upon necessity. In that he discloses converting polygon data into precise shape data suitable for free-form surface representation. In addition, figures 9-10 discloses each icon represents either one cell or two cells related to each other through an operator. Two cells may be pasted by coinciding the flat top of one cell with the flat bottom of the other. The cells for hollow contours are depicted with white (open) icons and cells for solid contours with black (solid) icons. In addition, figures 6-8 of Shinagawa disclose scripting language for a program. In that a programmer is a user that is capable to declare syntax for a particular script of programming language to be operable. Figures 6-8 show examples of operator programs in pseudo-Pascal code. These codes define two procedures and three functions for later use for the users.

Shinagawa fails to explicitly teach as claimed geometric cells. Rossignac, on the other hand, specifically teaches geometric cells (col. 1, lines 58-67; col. 2, lines 1-30; col. 3, lines 20-56; col. 4, lines 8-10). Therefore, having the combined teaching of Shinagawa and Rossignac as a whole, one of ordinary skill in the art would have found it obvious to modify the cells of Shinagawa to have a CAD systems including a geometric cells as claimed. Doing so would enable restoration of cells into geometric cells with each cell has a unique identifier and contains data defining the specific geometric feature with which it is associated (Rossignac: pages 150-151).

Re claims **2, 4, 6, 8, 10, and 12**, Shinagawa teaches the computer system operation method wherein at least one of input constraints is selected from the group consisting of constraints relating to cell dimension (fig. 1); constraints relating to the topology of a cell (col.20, lines 6-26); constraints relating to the history of the model evolution (col.9, lines 13-46—the array of parent discloses the history of the model evolution); constraints relating to specific attributes of a cell (col. 22, line 51 to col. 23, line 6—parameters correspond to attributes); and constraints relating to geometrical indications of a cell (figs 5-9).

Re claim **3**, the limitations of claim 3 are identical to claim 1 above except for the limitations further discussed below. Therefore, claim 3 is treated the same as discussed with respect to claim 1 above. Shinagawa teaches a CAD/CAM apparatus comprising (col. 1, lines 7-25), an input device (fig. 18-element 2); a central processing unit (col. 1, lines 40-55); and a display device (fig. 30—element 43).

Re claims **14, 16-17, 20, and 22,** the limitations of claims 14, 16-17, 20, and 22 are identical to claims 2 and 3 above. Therefore, claim 14, 16-17, 20, and 22 are treated the same as discussed with respect to claims 2 and 3 above.

Re claims **15, 18-19, 21, and 23,** the limitations of claims 15, 18-19, 21, and 23 are identical to claims 1 and 2 above. Therefore, claims 15, 18-19, 21, and 23 are treated the same as discussed with respect to claims 1 and 2 above.

Re claim **24**, Shinagawa teaches automatically selecting geometric features of the model based on the generated list of cells and receiving a user input to execute a change to each of the automatically selected geometric features (col. 23, lines 18-40; fig. 47).

Re claim **25**, Shinagawa teaches a scripting language program received as a CAD system user input (figs. 6-8). In figures 6-8, Shinagawa discloses scripting language for a program. In that a programmer is a user that is capable to declare syntax for a particular script of programming language to be operable.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu-Thao Havan whose telephone number is (703) 308-7062. The examiner can normally be reached on Monday to Thursday from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

TTH

JEFFERY BRIER
PRIMARY EXAMINER